

VICKIE R NORTON, BSME MSc ATP
PROJECT ENGINEER/AIRLINE TRANSPORT PILOT

EDUCATION

Masters of Science Aviation/Aviation Safety, Florida Institute of Technology, 2014.
Bachelor of Science Mechanical Engineering, Michigan Technological University, 1988.

PROFESSIONAL ASSOCIATIONS

Human Factors and Ergonomics Society, 2015
National Association of Professional Women, 2015
The Honor Society of Phi Kappa Phi, 2014
Lawyer-Pilots Bar Association, 2010
Airline Pilots Association, since 1995
Aircraft Owners and Pilots Association, since 1994
Southern California Professional Engineers Association, 1989 to 1994

PROFESSIONAL EXPERIENCE

MEA FORENSIC ENGINEERS & SCIENTISTS

Project Engineer, 2009 to Present

Responsible for technical investigations involving aircraft accident/incident reconstruction, system/powerplant malfunctions and failure analysis, operational, maintenance, regulatory and human factors effects. Case analysis includes NTSB report review; aircraft design/operating envelope, component design, assembly and installation; compliance with and adequacy of maintenance manuals and required inspection, repair and overhaul schedules, Service Bulletins and Airworthiness Directives; pilot-in-command training, licenses, ratings, proficiency and recency of experience; preflight planning and prevailing weather conditions, and the potential effects of "third party" (non-pilot) error, e.g. Air Traffic Control, flight dispatch, aircraft fueling/loading, airfield lighting/signage defects, etc.

UNITED AIRLINES

Captain, 1995 to Present

Responsible for the safe operation and the final authority of commercial flights operated under FAA Part 121 Scheduled Air Carriers for United Airlines, 15,000+ flight hours with 7,400+ hours as Pilot-in-Command at UAL. Type rated in the B767, B757, B737 and A-320; B747 Flight Engineer qualified. Experienced in operations in the domestic U.S., Alaska, Hawaii and Canada; Latin America, including Mexico City and San Salvador, and the Pacific Rim, including Narita, Osaka, Beijing, Shanghai, Seoul, Guam and Saipan. Currently qualified and operating as a Los Angeles-based Boeing 737 Captain.

RENO AIR EXPRESS

First Officer, 1994-1995

Operated British Aerospace Jetstream 31/32 twin turboprop aircraft as Second-in-Command for commercial flights under FAA Part 135 rules for commuter flights. Experienced in operations including no-autopilot, winter ops/icing, mountain flying and short-field takeoff and landing procedures.

MCDONNELL DOUGLAS CORPORATION/DOUGLAS AIRCRAFT COMPANY, (DAC)

Project Engineer/Team Leader, 1989-1994

Mechanical engineering applications ranging from product development through flight test, certification and product support engineering. Managed in-house design teams and commercial vendors from initial RFP through FAA certification. Authored technical information for airline training and maintenance manuals. Performed Failure Mode Analysis of both pre-certification as well as failed in-service components, including stress, strain, vibration and metallurgical analysis. Participated in multiple Twinjet and Trijet on-site flight test programs in locations ranging from Edwards AFB, CA to Yuma, AZ to Roswell, N.M. Oversaw and certified vendor design and dynamometer testing through company FAA Designated Engineering Representative (DER) status. Member of joint FAA/DAC Weekly Accident/Incident Investigations Board, including failure sequences through analysis and overlay of digital flight data and cockpit voice recorders. Primary FAA/NTSB contact for DAC Brake Systems and Engineering

Department. Presented various DAC engineering reports and accident/incident summaries at annual Team Conference and industry events, as well as FAA/NTSB hearings.

MAJOR PROJECTS

Commercial aircraft steel brake performance/certification through FAR Part 25 aircraft flight testing and laboratory dynamometer testing. All testing was full-spectrum to include light weight and speed configurations up to and including maximum kinetic energy rejected takeoffs, (RTO's).

Re-established commercial aircraft industry steel brake wear limits as a result of investigation of major U.S. airline runway overrun. Affected aircraft were DC-8/DC-9/DC-10 and MD-80 series; brake wear limits were adjusted downward to reflect operation in a field-worn condition. Deposition given in U.S. District Court, Southern District of New York case of Goodyear Tire and Rubber Co. vs. McDonnell Douglas Corp., 1993.

MD-80 series aircraft landing gear vibration induced by brake and antiskid systems, resulting in multiple landing gear failures on touchdown. Investigation included detailed systems analysis of hydraulic response, hydraulic cross-talk and servo control valves integrated with MD-80 landing gear, braking system and antiskid control unit logic.

MD-80 series aircraft foreign object debris (FOD) investigation into the aft-mounted engines "fodding" when operating on non-grooved runways or those otherwise contaminated by standing water, snow or slush. Resulted in design and installation of nose landing gear-mounted spray deflectors.

MD-11 initial carbon brake development, full spectrum FAR Part 25 flight testing and integration with upgraded (from DC-10) antiskid, autobrake and brake temperature-monitoring/tire pressure-indicating systems and their associated software.

PUBLICATIONS

Norton VR, Bailey MN (2011). Aircraft Accident Investigation: Eight Tips for Deploying an Aviation Expert. The Advocate, pp 82-86.

Norton VR (2015). Pilot Duty of Care and the Role of the Human Factors Expert. MEA Forensic Publications, Aviation Series.

LECTURES AND PRESENTATIONS

March 2016 – Introduction to Aerospace Engineering, Long Beach State University, Long Beach, CA.

May 2015 – Introduction to Aerospace Engineering, Long Beach State University, Long Beach, CA.

November 2014 – Human Factors Considerations in General Aviation Accident Investigations, 2014 International Air and Transportation Safety Bar annual conference in New York, NY.

July 2014 – Pilot Duty of Care and the Role of the Human Factors Expert, 2014 American Association for Justice annual convention in Baltimore, MD.

April 2014 – Introduction to Aerospace Engineering, Long Beach State University, Long Beach, CA.

April 2013 – Introduction to Aerospace Engineering, Long Beach State University, Long Beach, CA.

May 2012 – Introduction to Aerospace Engineering, Long Beach State University, Long Beach, CA.

July 2011 – Court Reporting Tips from an Expert Witness, Sage College School of Court Reporting, Moreno Valley, CA.

May 2011 – Introduction to Aerospace Engineering, guest speaker at Long Beach State University, Long Beach, CA.

July 2010 – Top Three Things a Commercial Airline Pilot Would Change to Improve Aviation Safety. Aviation Section, American Association for Justice 2010 Annual Convention, Vancouver, BC.

May 2010 – Introduction to Aerospace Engineering, guest speaker at Long Beach State University, Long Beach, CA

February 2010 – Captain/Dispatcher Joint Authority under Part 121. Lawyer-Pilots Bar Association Winter Meeting, Hawks Cay Resort, FL.

PROFESSIONAL DEVELOPMENT/TRAINING

2016 – 50th Annual SMU Air Law Symposium, Dallas, TX.

2014 – Fatigue Risk Management Systems (FRMS), Capstone Project, Florida Institute of Technology.

2014 – Aviation Security, Florida Institute of Technology.

2014 – 48th Annual SMU Air Law Symposium, Dallas, TX.

2013 – Aircraft Accident Investigation, Florida Institute of Technology.

2013 – 47th Annual SMU Air Law Symposium, Dallas, TX.

2013 – Safety Management Systems, Florida Institute of Technology.

2013 – Advanced Aviation Physiology, Florida Institute of Technology.

2012 – Complex Aviation Systems, Florida Institute of Technology.

2012 – Human Factors in Man-Machine Systems, Florida Institute of Technology.

2012 – 46th Annual SMU Air Law Symposium, Dallas, TX.

2011 – Lawyer Pilots Bar Association, Carlsbad, CA.

2011 – 45th Annual SMU Air Law Symposium, Dallas, TX.

2010 – American Association for Justice 2010 Annual Convention, Vancouver, BC.

2010 – 44th Annual SMU Air Law Symposium, Dallas, TX.

2010 – Lawyer-Pilots Bar Association (LPBA) Winter Meeting, Hawks Cay Resort, FL.

2009 – USC Viterbi School of Engineering, Aviation Safety & Security: “Legal Aspects of Aviation Safety” Course.

2008 – FAA/United Airlines Runway Incursion/Operational Safety Course.

2005 – Private Rotorcraft - Helicopter license.

2004 – A-320 Type Rating.

2002 – United Airlines/FAA Advanced Security Training. (Domestic and International Operations)

2001 – 737 Type Rating.

1998-2001 – FAA Part 121 Extended Twin-Engine Over Water Operations (ETOPS).

1998 – 757/767 Type Rating.

1995 – Present – Annual Recurrent Qualification Training, United Airlines.

1995 – Present – FAA/UAL Security Training.

1995 – Present – Emergency Evacuation Training.

1995 – Present – Hazardous Materials Training.

1995 – Present – Takeoff and Landing Performance Calculations, (i.e. cluttered runway, bleeds-off, thrust-reverser inoperative, etc.)

1995 – Present – Windshear/Microburst Training and Recovery.

1995 – Present – Aircraft Unusual Attitude/Upset and Recovery.

1995 – Present – Winter Operations Training and Procedures.

1995 – Present – Proficiency Training/Proficiency Checks on currently qualified fleet in 9-18 month intervals.

1995 – 747 Flight Engineer License.

1995 – United Airlines “Actual Fire” Course. (Identification by fire type, location; methods of fighting)

1994 – Present – Emergency Procedures Training for Commercial and Transport Category Aircraft Systems Failures/Engine Failures/Fires/Shutdowns.

1994-1996 – Consultant FAA DER with “Systems and Equipment” designation by FAA authorizing office ANM-130L.

1994 – Certified Flight Instructor (CFI) Airplane Single Engine Land, Ground Instructor. (non-current)

1992 – Present – FAA Air Traffic Control Procedures/Airspace Requirements.

1991 – Awarded Company (Douglas Aircraft Co.) FAA Designated Engineering Representative (DER) with “Systems and Equipment” designation by FAA authorizing office ANM-130L.

1990-1994 – NTSB Probable Cause Report review/analysis.

1990-1994 – Presenter at annual Douglas Aircraft Company/Industry “Team Conference” Meetings.

1990-1992 – MD-11 FAR Part 25 Certification/Flight Test.

1990 – Accident Investigation Assistance Seminar. (Douglas Aircraft Company)

1989-1991 – Major Air Carrier Brake Overhaul/Maintenance Compliance Analysis.

1989 – Failure Mode Effects Analysis (FMEA) and Fault Tree Analysis (FTA) of Transport Category Aircraft Brake, Antiskid and Autobrake Systems.

*09/10/21